NOTES, ABSTRACTS, AND REVIEWS.

Henry F. Alciatore, 1866–1923.

Henry F. Alciatore, a member of the well-known New Orleans family of that name, died in that city on February 2, 1923.

Mr. Alciatore was for many years a valued official of the Weather Bureau. He had been in poor health for several years and was forced to give up active work about three years ago. During the 34 years of his connection with the Government service, he filled many important assignments, some of which were at New Orleans, La., Galveston, Tex.; San Francisco, Calif.; Portland, Oreg.; Reno, Nev.; and San Diego, Calif.

Mr. Alciatore will be remembered as a gentleman of most pleasing personality, thoroughly loyal to the service in which he spent the greater part of his life and to which he contributed of his knowledge and experience.

He is survived by his widow, four brothers, a sister, and numerous cousins, nephews, and nieces.—*A. J. H.*

THE COURSE OF THE GULF STREAM IN 1919–21, AS SHOWN BY DRIFT BOTTLES.

By Prof. JAMES W. MAVOR.

[Abstracted from *Science*, January 5, 1923.]

Drift bottle experiments have been conducted by the biological board of Canada for some time past. The results have appeared in various numbers of *Science* for 1920, 1921, and 1922; also in *Proceedings American Fisheries Society*, 1920, page 334.

In the issue of *Science* above mentioned an account is given of the finding of four bottles which crossed the Atlantic after being set adrift in the Bay of Fundy in August, 1919. The record of finding follows:

No. 198. Azores, island of Flores, August 8, 1920.
No. 230. Orkney Islands, island of Papa Westray, January 21, 1921.
No. 98. Great Britain, Dyffryn, North Wales, March 25, 1921.
No. 129. Norway, 2 miles from land at the Bohle-Walstation, Soro, Westfinmark, July 16, 1921.

The distances these bottles must have traveled measured along the shortest courses which they could have taken are approximately 2,000, 2,800, 2,900, and 3,800 geographical miles. The corresponding time which the bottles were "out" are 12, 17, 19, and 23 months, respectively. This close correspondence between the distance traveled and the time the bottles were "out" indicates that they were picked up relatively soon after reaching the coast. If this assumption is correct, the average rates at which the bottles traveled across the Atlantic were 5.8, 5.4, 5.1, and 5.5 geographical miles per day.—*A. J. H.*

A PERIOD OF WARM WINTERS IN EUROPE.

By C. E. P. BROOKS.

[Excerpts from *Meteorological Magazine*, September, 1922, 57: 203–205, map.]

Among the most interesting problems of meteorology are the local changes of climate extending over years or even decades. Their causes are usually obscure, and often the most that can be said is that they are secondary effects of long-period fluctuations in the circulation of the earth's atmosphere. An example which has recently come to light is the abnormal winter warmth of central Europe during the decade 1911 to 1920.

The differences between the mean temperatures for January, February, and December for the years 1911 to 1920, and the long-period averages for the several stations (usually covering the years 1851–1910) show that the maximum effect, exceeding 3° F., extends in a long belt from Denmark to the Balkan Peninsula * * *. From the central isanomaly of 3° F. the excess falls off rapidly in all directions except the west * * *. On the Atlantic seaboard the winters of the decade in question have been slightly colder than the normal * * *.

We have here an appreciable change of climate which appears to be analogous to the Brückner cycle, but not identical with it because the Brückner cycle should give low instead of high temperatures during the past decade. A tentative explanation connects it with the general decrease of sunspot numbers since the nineteenth century. Sunspot numbers are an index of the intensity of the solar radiation which governs the strength of the earth's atmospheric circulation. Now a by-product of this circulation is the gradient between the subtropical Atlantic anticyclone and the Icelandic minimum. (The mean gradient between Iceland and Lisbon has been decreased from 21.2 mb. to 19.5 mb. during the period 1911–1918.) At first sight this should mean decreased southwesterly winds from the Atlantic and consequently lower winter temperatures over central Europe but it happens that the winter weather in this region is mainly anticyclonic and is only slightly affected by the Atlantic pressure gradient. its severity is, however, very much lessened when frequent depressions break through, and this happens most readily when the atmospheric circulation is weakest and the oceans are, accordingly, relatively cold.

When the air circulation is strong, that of the ocean is strong also, and in temperate latitudes the waters are highly warmed so that depressions follow the coasts and the continental anticyclones escape their influence.

This hypothesis is only tentative, but it agrees with Brückner's conclusions based on his studies of the 35-year cycle,[1] and also with those based on the study of the secular variation of the annual means of pressure and temperature since 1870.[2]

RELATIVE SUNSPOT NUMBERS, 1920–1922.

Below are given the relative numbers of sun spots as observed and published by A. Wolfer, Zurich, Switzerland. The numbers are a continuation of those printed in this REVIEW, August, 1920, page 460.—*A. J. H.*

TABLE 1.

Year.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov	Dec.	Annual.
1920	57.3	50.9	71.9	14.3	33.7	38.8	26.5	18.6	38.7	48.8	24.6	39.9	38.7
1921	28.8	27.6	27.5	30.5	22.3	34.5	42.4	20.8	16.7	16.1	13.4	15.7	24.7
1922	10.2	27.9	66.0	11.4	7.7	5.8	9.7	5.3	5.2	8.1	6.7	18.7	14.7

[1] *Klimaschwankungen seit 1700.* Wein, 1890.
[2] Brooks, C. E. P.: The Secular Variation of Climate, *Geog. Rev.*, New York, 11, 1921, p. 120.